# Stem cell therapies for diabetes: wrap them up

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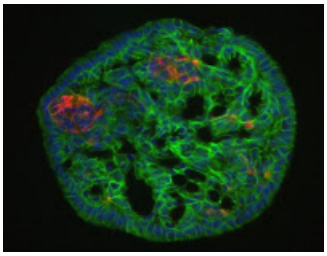

A pancreatic beta cell.
Image by Itkin-Ansari lab

Type 1 diabetes has been a major focus of CIRM funding, including a disease team award to San Diego-based ViaCyte that is expected to bring a therapy to trial within four years.

Sanford-Burnham has a great post on their blog about how stem cell therapies for diabetes might work. They discuss the work of Pamela Itkin-Ansari, who is working with ViaCyte to develop a way of wrapping transplanted cells to protect them from the immune system. They write:

"Her laboratory has placed human pancreatic precursor cells in an immuno-protective device and transplanted them into mice. She was testing whether precursor cells will mature into productive beta cells in the body and whether the encapsulation device, made from a material akin to Gore-Tex, could prevent the immune system from attacking transplanted cells.

Early studies have been positive, they write.

"We were excited to see how well they did," says Dr Itkin-Ansari. "We could see evidence of new beta cells forming and replicating. That meant the environment in the device was conducive to beta cell maturation and function. We wondered whether T cells, although unable to penetrate the device, would cluster around it. Interestingly, we found no evidence of an active immune response, suggesting that the cells in the device were invisible to the immune system."

A.A.

**Tags:** ViaCyte, itkin-Ansari, Diabetes, Sanford-Burnham